Fig 1A

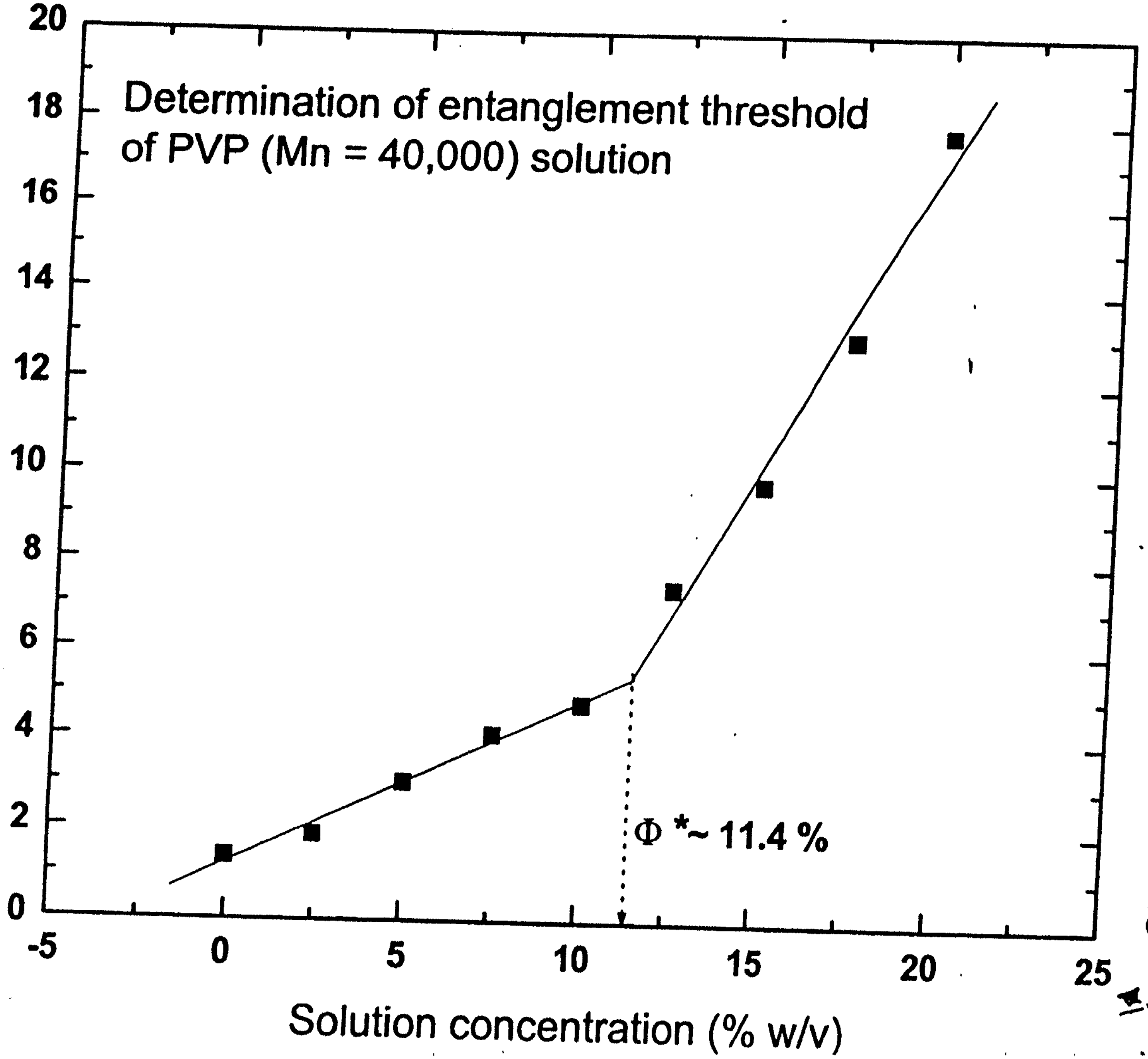
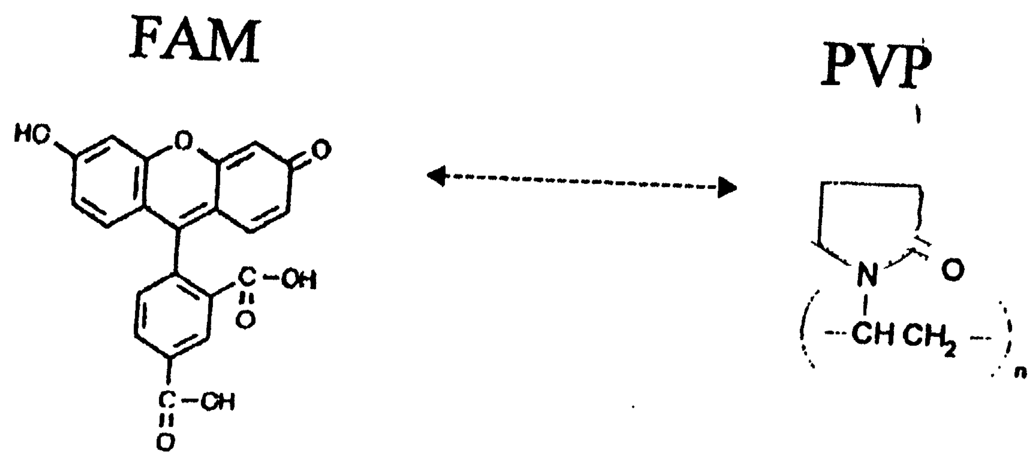


Fig 1A: Plot of ~~PVP (Mn=40000)~~ viscosity as function of PVP (Mn=40000) concentration. The entanglement threshold φ* is defined as a point of change in the slope. Above φ* the viscosity increases more rapidly.

Figure 2 1B



Structures of PVP and a fluorescent label (FAM). Separation mechanism presumed to be due to interaction of multiple aromatic rings of the fluorescent label and the 5-member ring of the PVP

Figure 1A [2A]

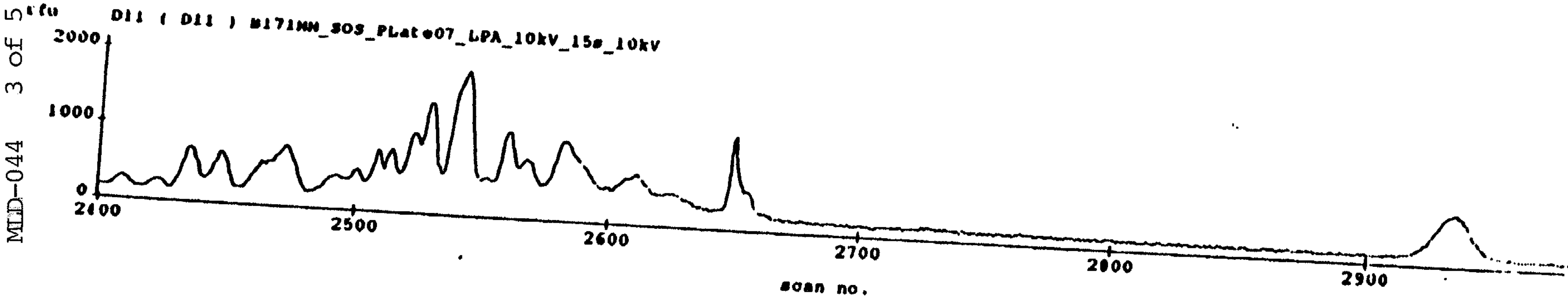
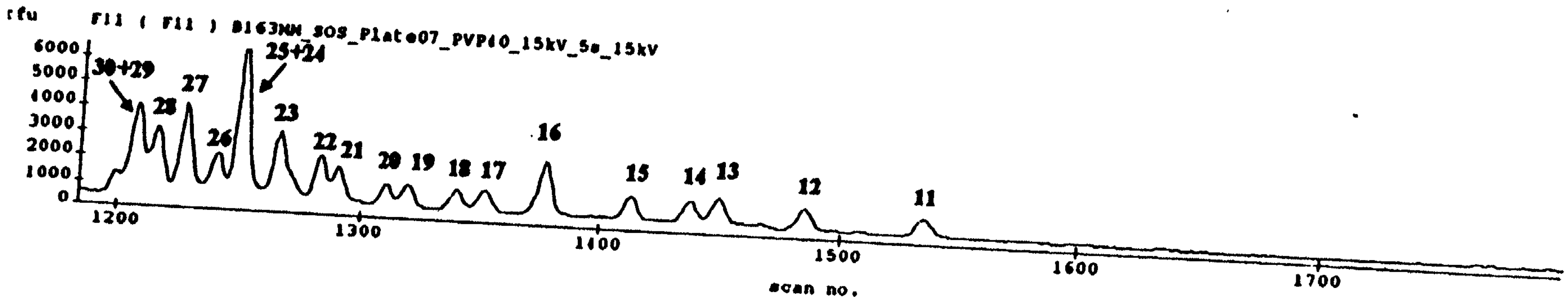


Figure 1B [2B]



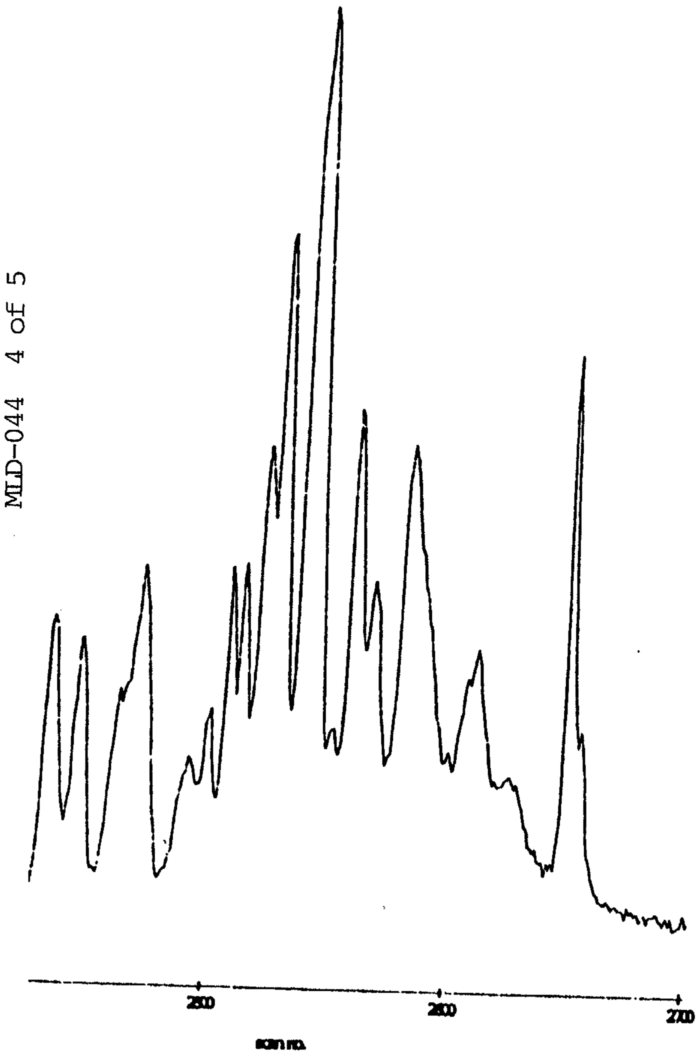
Comparison of separation of 20 model oligonucleotides ranging from 11 to 30 bases:

A) high-molecular weight LPA matrix.
Conditions: LPA (MegaBACE) in 50 mM Tris-TAPS buffer, Injection 15s at 10kV, separation at 10kV

B) low-molecular PVP pseudophase.
Conditions: 4.0% PVP (Mr = 40,000) in 50 mM Tris-TAPS buffer, Injection 5s at 15kV, separation at 15kV

Alternative view of Figure 2

2A



2B

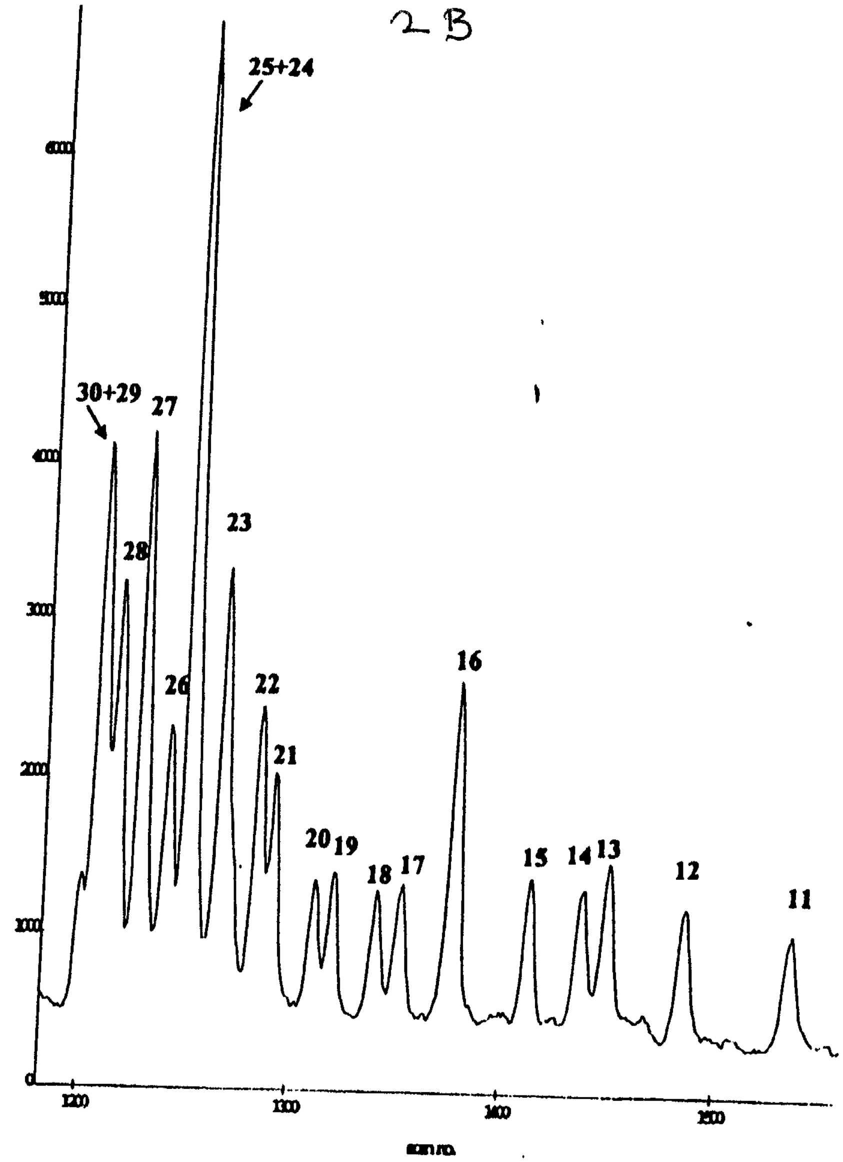


Figure 4A

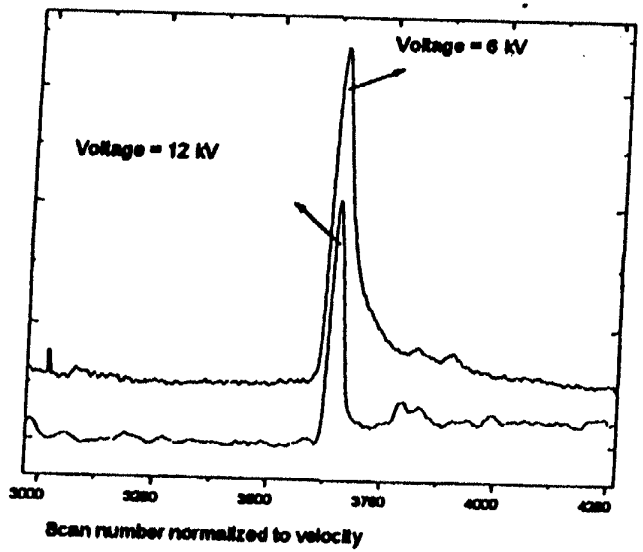
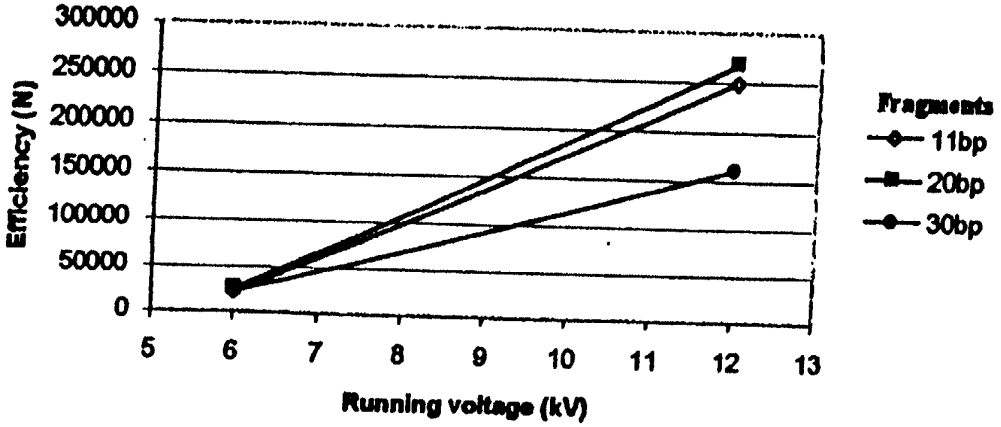


Figure 4B



Improvement of peak efficiency as a result of increased running voltage in PVP pseudophase system: At higher voltage the time spent in the capillary is shorter, therefore the longitudinal diffusion is suppressed resulting in narrower peaks (Figure 4A). The narrower shapes directly translate into an increase in efficiency expressed by the number of theoretical plates (Figure 4B)